

IN THE CLAIMS

Pursuant to 37 CFR §121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Please amend claims 24-26 as follows:

1 1. (Previously Presented) An access point device, comprising:

2 a wireless transmission and reception unit for transmitting information of the access point

3 where the wireless transmission and reception unit is located at or receiving information of

4 peripheral access point devices wirelessly;

5 a control unit for searching channel numbers used by the peripheral access point devices from

6 the information from the wireless transmission and reception unit, deciding an optimal channel

7 number from the channel numbers except for the used channel numbers, and setting the optimal

8 channel number as a channel number;

9 the control unit, when searching channel numbers used by the peripheral access point devices,

10 transmitting a probe request frame to the peripheral access point devices, receiving probe response

11 frames from the peripheral access point devices for a predetermined time, extracting the channel

12 numbers from the received probe response frames, and storing the extracted channel numbers; and

13 an operator terminal for managing and controlling the control unit.

Claim 2 (Canceled)

1 3. (Previously Presented) The device according to claim 1, wherein the control unit
2 transmits the probe request frame after setting a basic service set identifiers field of the probe
3 request frame as broadcast basic service set identifiers.

1 4. (Previously Presented) The device according to claim 1, wherein the control unit extracts
2 the channel numbers from direct sequence parameter sets of frame bodies of the probe response
3 frames.

1 5. (Previously Presented) An access point device, comprising:
2 a wireless transmission and reception unit transmitting information of the access point where
3 the wireless transmission and reception unit is located at or receiving information of peripheral
4 access point devices wirelessly;
5 a control unit searching channel numbers used by the peripheral access point devices from
6 the information from the wireless transmission and reception unit, deciding an optimal channel
7 number from among the channel numbers except for the used channel numbers, and setting the
8 optimal channel number as a designated channel number;
9 the control unit, when searching channel numbers used by the peripheral access point devices,
10 receiving beacon frames from the peripheral access point devices for a predetermined time,
11 extracting the channel numbers from the beacon frames, and storing the extracted channel numbers;
12 and
13 an operator terminal managing and controlling the control unit.

1 6. (Original) The device according to claim 5, wherein the control unit extracts the channel
2 numbers from direct sequence parameter sets of frame bodies of the beacon frames.

1 7. (Previously Presented) An access point device, comprising:
2 a wireless transmission and reception unit transmitting information of the access point where
3 the wireless transmission and reception unit is located at or receiving information of peripheral
4 access point devices wirelessly;
5 a control unit searching channel numbers used by the peripheral access point devices from
6 the information from the wireless transmission and reception unit, deciding an optimal channel
7 number from among the channel numbers except for the used channel numbers, and setting the
8 optimal channel number as a channel number;
9 the control unit, when searching channel numbers used by the peripheral access point devices,
10 receiving beacon frames from the peripheral access point devices for a predetermined time,
11 extracting the channel numbers from the beacon frames, and storing the extracted channel numbers;
12 the control unit, when determining the optimal channel number, selecting one of the channel
13 numbers except for the used channel numbers, deciding whether the channel numbers obtained by
14 subtracting ‘1’ and ‘2’ from the selected channel number and the channel numbers obtained by
15 adding ‘1’ and ‘2’ to the selected channel number have been used, and setting the selected channel
16 number as the optimal channel number when the channel numbers have not been used; and
17 an operator terminal managing and controlling the control unit.

1 8. (Previously Presented) A method for setting a channel of an access point device,
2 comprising:

3 a peripheral search step for receiving information from peripheral access point devices, and
4 searching channel numbers used by the peripheral access point devices;

5 the peripheral search step comprising the steps of a probe request frame transmission step
6 transmitting a probe request frame to the peripheral access point devices, a probe response frame
7 reception step receiving probe response frames from the peripheral access point devices for a
8 predetermined time, and a channel number extraction step extracting channel numbers from the
9 received probe response frames and storing the extracted channel numbers;

10 an optimal channel number decision step for selecting one of the channel numbers except for
11 the used channel numbers, and deciding whether the selected channel number is an optimal channel
12 number; and

13 a channel setting step for setting the selected channel number as a channel number when the
14 selected channel number is the optimal channel number.

Claim 9 (Canceled)

1 10. (Previously Presented) The method according to claim 8, wherein the probe request
2 frame transmission step transmits the probe request frame after setting basic service set identifiers
3 field of the probe request frame as broadcast basic service set identifiers .

1 11. (Previously Presented) The method according to claim 8, wherein the channel number
2 extraction step extracts the channel numbers from direct sequence parameter sets of frame bodies
3 of the probe response frames.

1 12. (Previously Presented) A method for setting a channel of an access point device,
2 comprising:

3 a peripheral search step receiving information from peripheral access point devices, and
4 searching channel numbers used by the peripheral access point devices;

5 the peripheral search step comprising the steps of a beacon frame reception step receiving
6 beacon frames transmitted from the peripheral access point devices for a predetermined time, and
7 a channel number extraction step extracting the channel numbers from the beacon frames and storing
8 the extracted channel numbers;

9 an optimal channel number decision step selecting one of the channel numbers except for the
10 used channel numbers, and deciding whether the selected channel number is an optimal channel
11 number; and

12 a channel setting step setting the selected channel number as a channel number when the
13 selected channel number is the optimal channel number.

1 13. (Original) The method according to claim 12, wherein the beacon frame reception step
2 extracts the channel numbers from direct sequence parameter sets of frame bodies of the beacon

3 frames.

1 14. (Previously Presented) A method for setting a channel of an access point device,
2 comprising:

3 a peripheral search step receiving information from peripheral access point devices, and
4 searching channel numbers used by the peripheral access point devices;

5 the peripheral search step comprising the steps of a probe request frame transmission step
6 transmitting a probe request frame to the peripheral access point devices, a probe response frame
7 reception step receiving probe response frames from the peripheral access point devices for a
8 predetermined time, and a channel number extraction step extracting channel numbers from the
9 received probe response frames and storing the extracted channel numbers;

10 an optimal channel number decision step selecting one of the channel numbers except for the
11 used channel numbers, and deciding whether the selected channel number is an optimal channel
12 number;

13 the optimal channel number decision step comprising selecting one of the channel numbers
14 except for the used channel numbers, and deciding whether the channel numbers obtained by
15 subtracting 1 and 2 from the selected channel number and the channel numbers obtained by adding
16 1 and 2 to the selected channel number have been used; and

17 a channel setting step setting the selected channel number as a designated channel number
18 when the selected channel number is the optimal channel number.

1 15. (Previously Presented) An apparatus, comprising:

2 a first unit transmitting information of the access point where the first unit is located at or

3 receiving information of peripheral access point devices wirelessly;

4 a second unit searching channel numbers used by the peripheral access point devices from

5 the information from the first unit, deciding an optimal channel number from the channel numbers

6 except for the used channel numbers, and setting the optimal channel number as a channel number,

7 when searching the channel numbers, the second unit transmitting a probe request frame to the

8 peripheral access point devices, receiving probe response frames from the peripheral access point

9 devices for a predetermined time, and extracting the channel numbers from the received probe

10 response frames; and

11 a third unit managing and controlling the second unit.

1 16. (Original) The apparatus according to claim 15, wherein the second unit stores the

2 extracted channel numbers.

1 17. (Original) The apparatus according to claim 16, wherein the second unit transmits the

2 probe request frame after setting basic service set identifiers field of the probe request frame as

3 broadcast basic service set identifiers .

1 18. (Original) The apparatus according to claim 17, wherein the second unit extracts the

2 channel numbers from direct sequence parameter sets of frame bodies of the probe response frames.

1 19. (Original) The apparatus according to claim 18, wherein, when determining the optimal
2 channel number, the second unit selects one of the channel numbers except for the used channel
3 numbers, decides whether the channel numbers obtained by subtracting a first number and a second
4 number from the selected channel number and the channel numbers obtained by adding the first
5 number and the second number to the selected channel number that have been used, and sets the
6 selected channel number as the optimal channel number when the channel numbers have not been
7 used.

1 20. (Previously Presented) An apparatus, comprising:
2 a first unit transmitting information of the access point where the first unit is located at or
3 receiving information of peripheral access point devices wirelessly;
4 a second unit searching channel numbers used by the peripheral access point devices received
5 from the first unit, the second unit receiving beacon frames from the peripheral access point devices
6 for a predetermined time and extracting the channel numbers from the beacon frames and storing the
7 extracted channel numbers when searching the channel numbers;
8 the second unit deciding an optimal channel number from the channel numbers except for
9 the used channel numbers, and setting the optimal channel number as a channel number; and
10 a third unit managing and controlling the second unit.

1 21. (Original) The apparatus according to claim 20, wherein the second unit extracts the

2 channel numbers from direct sequence parameter sets of frame bodies of the beacon frames.

1 22. (Original) The apparatus according to claim 21, wherein, when determining the optimal
2 channel number, the second unit selects one of the channel numbers except for the used channel
3 numbers, decides whether the channel numbers obtained by subtracting a first number and a second
4 number from the selected channel number and the channel numbers obtained by adding the first
5 number and the second number to the selected channel number have been used, and sets the
6 selected channel number as the optimal channel number when the channel numbers have not been
7 used.

23. (Cancelled)

1 24. (Currently Amended) The computer-readable storage medium encoded with
2 computer-executable instructions for performing a method, composed of:
3 transmitting a probe request frame after setting a basic service set identifiers field of the
4 probe request frame as broadcast basic service set identifiers;
5 receiving probe response frames from peripheral access point devices for a predetermined
6 time, and searching channel numbers used by the peripheral access point devices;
7 extracting channel numbers from the received probe response frames, and storing the
8 extracted channel numbers;
9 extracting the channel numbers from direct sequence parameter sets of frame bodies of the

10 probe response frames;
11 selecting one of the channel numbers except for the used channel numbers, and deciding
12 whether the selected channel number is an optimal channel number; and
13 setting the selected channel number as a channel number when the selected channel number
14 is the optimal channel number.

1 25. (Currently Amended) The computer-readable storage medium encoded with
2 computer-executable instructions for performing a method, composed of:
3 transmitting a probe request frame to the peripheral access point devices;
4 receiving beacon frames transmitted from the peripheral access point devices for a
5 predetermined time, searching channel numbers used by the peripheral access point devices, and
6 extracting channel numbers from direct sequence parameter sets of frame bodies of the
7 beacon frames;
8 extracting the channel numbers from the beacon frames, and storing the extracted channel
9 numbers;
10 selecting one of the channel numbers except for the used channel numbers, and deciding
11 whether the selected channel number is an optimal channel number; and
12 setting the selected channel number as a channel number when the selected channel number
13 is the optimal channel number.

1 26. (Currently Amended) The computer-readable storage medium encoded with

2 computer-executable instructions for performing a method composed of:
3 transmitting a probe request frame to the peripheral access point devices;
4 receiving information from peripheral access point devices, and searching channel numbers
5 used by the peripheral access point devices;
6 extracting channel numbers from the received probe response frames;
7 selecting one of the channel numbers except for the used channel numbers;
8 deciding whether the channel numbers obtained by subtracting one and two from the selected
9 channel number and the channel numbers obtained by adding one and two to the selected channel
10 number have been used; and
11 setting the selected channel number as a channel number when the selected channel number
12 is the optimal channel number.